

WHAT IS CLAIMED IS:

1. A method of manufacturing a structure with pores, comprising the steps of:

5 (A) disposing a lamination film on a substrate, the lamination film comprising insulating layers and a layer to be anodically oxidized and containing aluminum as a main composition; and

10 (B) performing anodic oxidation starting from an end surface of the lamination film to form a plurality of pores having an axis substantially parallel to a surface of the substrate,

15 wherein the layer to be anodically oxidized is sandwiched between the insulating layers, and a projected pattern substantially parallel to the axis of the pores is formed on at least one of the insulating layers at positions between the pores.

20 2. A method according to claim 1, wherein the layer to be anodically oxidized is made of aluminum.

3. A method according to claim 1, wherein at least one of the insulating layers is formed by anodic oxidation.

25 4. A method according to any one of claims 1 to 3, wherein a height of the projected pattern of the insulating layer is $1/10$ or more of a thickness of the

layer to be anodically oxidized.

5 5. A method according to any one of claims 1 to 3, further comprising a step of filling a filler in each of the pores after said step of performing anodic oxidation.

10 6. A method according to claim 5, wherein said step of filling a filler is performed by plating.

15 7. A method according to any one of claims 1 to 3, further comprising a step of forming an electrode layer connected to a bottom of each of the pores.

20 8. A structure with pores formed by the method according to any one of claims 1 to 3.

25 9. A structure according to claim 8, further comprising an electrode layer connected to a bottom of each of the pores.

10. A method of manufacturing a structure with pores comprising the steps of:

(A) sandwiching a film containing aluminum as a main composition between first and second insulating films; and

(B) anodically oxidizing the film having aluminum

as the main composition along a direction substantially perpendicular to a direction of making the first and second insulating films face each other,

wherein projections are formed on a surface of at least one of the first and second insulating films in contact with the film containing aluminum as the main composition, the projections controlling a pitch between the pores to be formed by anodic oxidation.

11. A structure with pores comprising:

(A) a film sandwiched between first and second insulating films, said film containing aluminum oxide as a main composition;

(B) a plurality of pores disposed in said film containing aluminum as the main composition, a longitudinal direction of each of said pores being a direction substantially perpendicular to a direction of making said first and second insulating films face each other, and each of said pores being disposed substantially parallel; and

(C) a projected pattern disposed among said pores, wherein said projected pattern is made of an insulating member in contact with said first or second insulating film and has a line shape substantially parallel to a longitudinal direction of each of said pores.

12. A structure according to claim 11, wherein said projected pattern is made of a partial region of said first or second insulating film.

2025-11-19 14:20:20